


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Patent Application of:	Roland E. Williams		
Serial Number:	10/020,572	Art Unit:	2671
Filed:	December 12, 2001	Examiner:	Regina Liang
For Title:	Key Press Disambiguation Using a Keypad of Multiple Keys		

Mail Stop: Appeal
 Commissioner for Patents
 P.O. Box 1450
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I, JAMES D. IVEY, certify that this paper and the enclosed: Appeal Brief, PTO/SB/21 Transmittal Form, Form PTO/SB/17 Fee Transmittal, and Form PTO2038 for Appeal fees are being transmitted by facsimile to (703) 872-9319 to Mail Stop: Appeal, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 7, 2005.

February 7, 2005


 James D. Ivey, Reg. No. 37,016

APPEAL BRIEF — APPENDIX

Applicant respectfully submits the following Appendix to the Appeal Brief in the referenced case which is filed herewith. The following are the claims involved in this appeal.

Claims 1-8 (Canceled).

9. (Previously presented) A method for disambiguating among two or more symbols associated with a key, the method comprising:
- detecting a first type of actuation of the key;
 - in response to the detecting of the first type of actuation, displaying a representation of the two or more symbols;
 - detecting a second type of actuation of the key; and
 - selecting a selected one of the two or more symbols in accordance with the second

type of actuation.

10. (Original) The method of Claim 9 wherein the first type of actuation includes pressing the key.

11. (Original) The method of Claim 10 wherein the second type of actuation includes rocking the key.

12. (Original) The method of Claim 9 wherein the key is a virtual key realized in a touch-sensitive device; and

further wherein the first type of actuation includes touching the virtual key within the touch-sensitive device.

13. (Original) The method of Claim 12 wherein the touch-sensitive device is a touch-sensitive screen.

14. (Original) The method of Claim 12 wherein the second type of actuation is a sliding along the touch-sensitive device.

15. (Previously presented) The method of Claim 9 wherein selecting comprises:

navigating through the representation according to the second type of actuation of the key.

16. (Previously presented) A machine readable medium useful in association with a machine which includes a processor and a memory, the machine readable medium including instructions which are configured to cause the machine to disambiguate among two or more symbols associated with a key of the machine by:

detecting a first type of actuation of the key;

in response to the detecting of the first type of actuation, displaying a representation of the two or more symbols;

detecting a second type of actuation of the key; and

selecting a selected one of the two or more symbols in accordance with the second type of actuation.

17. (Previously presented) The machine readable medium of Claim 16 wherein the first type of actuation includes pressing the key.

18. (Previously presented) The machine readable medium of Claim 17 wherein the second type of actuation includes rocking the key.

19. (Previously presented) The machine readable medium of Claim 16 wherein the key is a virtual key realized in a touch-sensitive device; and

further wherein the first type of actuation includes touching the virtual key within the touch-sensitive device.

20. (Previously presented) The machine readable medium of Claim 19 wherein the touch-sensitive device is a touch-sensitive screen.

21. (Previously presented) The machine readable medium of Claim 19 wherein the second type of actuation is a sliding along the touch-sensitive device.

22. (Previously presented) The machine readable medium of Claim 16 wherein selecting comprises:

navigating through the representation according to the second type of actuation of the key.

23. (Previously presented) A machine comprising:

a processor;

a memory operatively coupled to the processor; and

a data entry module (i) which executes in the processor from the memory and (ii) which, when executed by the processor, causes the machine to disambiguate among two or more symbols associated with a key of the machine by:

detecting a first type of actuation of the key;

in response to the detecting of the first type of actuation, displaying a representation of the two or more symbols;

detecting a second type of actuation of the key; and

selecting a selected one of the two or more symbols in accordance with the

second type of actuation.

24. (Previously presented) The machine readable medium of Claim 23 wherein the first type of actuation includes pressing the key.

25. (Previously presented) The machine readable medium of Claim 24 wherein the second type of actuation includes rocking the key.

26. (Previously presented) The machine readable medium of Claim 23 wherein the key is a virtual key realized in a touch-sensitive device; and
further wherein the first type of actuation includes touching the virtual key within the touch-sensitive device.

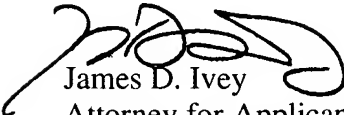
27. (Previously presented) The machine readable medium of Claim 26 wherein the touch-sensitive device is a touch-sensitive screen.

28. (Previously presented) The machine readable medium of Claim 26 wherein the second type of actuation is a sliding along the touch-sensitive device.

29. (Previously presented) The machine readable medium of Claim 23 wherein selecting comprises:

navigating through the representation according to the second type of actuation of the key.

Respectfully submitted,



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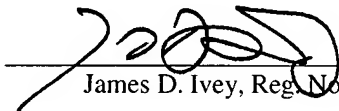
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APPEAL BRIEF

Applicant hereby files this Appeal Brief in support of the Appeal initiated by a Notice of Appeal filed on September 7, 2004. The requisite fee under 37 CFR 41.20(b)(2) of \$500 is enclosed herewith. For the reasons given below, Applicant respectfully requests reversal of the Examiner's rejection of Claims 9-29 under 35 U.S.C. §§ 102 and 103.

I. Real Party in Interest

The real party in interest is the assignee, Zi Corporation. The documents establishing ownership of the instant Application are recorded in the U.S. Patent and Trademark Office at reel 012742, frame 0723.

II. Related Appeals and Interferences

There are no known related appeals or interferences.

III. Status of the Claims

Claims 9-29 are pending and stand rejected. Claims 1-8 are canceled.

Claims 9, 10, 12, 13, 16, 17, 19, 20, 23, 24, 26, and 27 are rejected under 35 U.S.C. §102(e) as being anticipated by Hoeksma (U.S. Patent 6,271,835) .

Claims 9-29 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hirshberg (U.S. Patent 6,597,345) in view of King et al. (U.S. Patent 6,011,554).

IV. Status of Amendments

All amendments submitted in writing have been entered. In the Examiner's Advisory Action dated September 29, 2004, the Examiner asserted only a single objection to the pending claims, namely, that the first and second types of key actuation are not necessarily different from one another. In response thereto, Applicant offered to permit an Examiner's Amendment adding an explicit limitation in which the first and second types of key actuation as necessarily different from one another. The Examiner responded that such would overcome the rejections on Section 102 but not the rejections under Section 103. While the Advisory Action of September 29, 2004 made no mention of any rejections under Section 103, the Examiner apparently continues to maintain such rejections.

Applicant believes that the offered Examiner's Amendment has not been entered. Applicant hereby reiterates that offer in hopes that such an offer will help bring this case to issue.

V. Summary of the Invention

The present invention pertains to user-input using reduced keypads, e.g., a mobile telephone keypad. Actuating a key in a first manner identifies a set of two or more symbols associated with the key and causes the symbols to be displayed to the user. See Figure 5 in which pressing of an “8” key on a mobile telephone causes display of 17 different symbols associated with the “8” key. Actuating the same key in a second manner allows the user to select one of the symbols as the particular symbol intended to be entered by the user. See the state diagram of Figure 7 which illustrates the user navigation among the 17 symbols by rocking the “8” key in up, down, left, and/or right directions.

This type of user input is particularly useful in symbol sets other than the Latin alphabet. For example, Figure 8 shows a Japanese language symbol set associated with a “6” key on a mobile telephone in accordance with the present invention. This illustrative symbol set includes 35 different symbols associated with a single key yet allows the user to easily and intuitively specify any of the 35 symbols unambiguously.

VI. Issues

- A. Are Claims 9, 10, 12, 13, 16, 17, 19, 20, 23, 24, 26, and 27 anticipated by Hoeksma (U.S. Patent 6,271,835)
- B. Is Combination of Hirshberg and King et al. Properly Motivated in the Prior Art?

VII. Grouping of the Claims

With respect to Issue A, Claims 9, 10, 12, 13, 16, 17, 19, 20, 23, 24, 26, and 27 stand or

fall together.

With respect to issue B, all claims at issue stand or fall together.

VIII. Argument

A. Are Claims 9, 10, 12, 13, 16, 17, 19, 20, 23, 24, 26, and 27 anticipated by Hoeksma (U.S. Patent 6,271,835)

The Examiner rejected Claims 9, 10, 12, 13, 16, 17, 19, 20, 23, 24, 26, and 27 as being anticipated by Hoeksma (U.S. Patent 6,271,835). Applicant respectfully traverses this rejection and requests reversal of this rejection by this Appeal.

Claim 9 recites first and second *types* of actuation of a key, the same key. Hoeksma teaches only a single type of actuation and of different keys to disambiguate multiple characters associated with a single key. For example, in Figure 2, the user would press key 223 and then the key two spaces to the left to unambiguously enter the letter “M”, involving two separate keys and only a single *type* of actuation, namely, ordinary pressing of the keys.

Since Hoeksma neither teaches nor suggests first and second types of actuation of the same key to select from multiple symbols associated with the key, Claim 9 is allowable over Hoeksma. Claims 10-29 directly or indirectly recite the limitations of Claim 9 discussed above and are therefore similarly allowable over Hoeksma.

While the Examiner asserted that there is no limitation in Claims 9, 10, 12, 13, 16, 17, 19, 20, 23, 24, 26, and 27 that the first and second types of actuation are different from one another, Applicant has offered that such a limitation be made explicit.

B. Is Combination of Hirshberg and King et al. Properly Motivated in the Prior Art?

The Examiner rejected Claims 9-29 as being unpatentable over Hirshberg (U.S. Patent 6,597,345) in view of King et al. (U.S. Patent 6,011,554). Applicant respectfully traverses these rejections and requests reconsideration and withdrawal of this rejection.

In support of this rejection, the Examiner asserted that one would be motivated to use the touch-and-drag disambiguation of Hirshberg in conjunction with the select-from-list disambiguation of King et al. Applicant respectfully submits that Hirshberg and King et al. teach distinct, competing, and incompatible disambiguation methods. Therefore, there is no motivation, suggestion, or teaching – in the prior art of record – to combine the references in the manner asserted by the Examiner.

In particular, King et al. teach only word, word segment, and numerical candidates for disambiguation in selection list 76 – see, e.g., the table at column 10, lines 40-62. While letters are included in selection list 76, they are only included once fully disambiguated. King et al. teach “two-stroke” interpretation at column 8, line 50, to column 9, line 8. Prior to complete disambiguation of the letter to be entered, King et al. teach no display of the letter candidates. King et al. teach “multiple-stroke” interpretation at column 9, lines 9-43. Here, too, King et al. teach no display of the letter candidates prior to complete disambiguation. It is not immediately clear how one would integrate character disambiguation of Hirshberg into the word disambiguation taught by King et al. Specifically, since the selection list 76 is used for word disambiguation, it is not clear how selection list 76 can also be used for character disambiguation as suggested by the Examiner.

In addition, Hirshberg teaches that each key includes a representation of all characters

associated with the key. Thus, the step of displaying those same characters in response to a first type of actuation as recited by Claim 9 would seem entirely superfluous. The Examiner asserted the motivation of “[maximization of] the efficiency and accuracy of text entry.” However, it is unclear how redundantly and superfluously replicating Hirshberg's imprinting of each key in selection list 76 of King et al. after each key press aids efficiency and why such replication is even helpful and not annoying. Thus, Applicant respectfully submits that there is no maximization of efficiency and accuracy in combining the teachings of King et al. and Hirshberg.


Applicant respectfully submits that the only real motivation of record is found in Applicant's own Specification. Claim 9 recites “displaying a representation of the two or more symbols” “in response to the detecting of the first type of actuation.” The advantage of the recited displayed representation of the two or more symbols is shown in Applicant's Figures 5, 8, and 9 which illustrate that a rather large number of symbols can be associated with a single key if the user is permitted to navigate a table of symbols associated with a particular key. Accordingly, Claim 9 is allowable over Hirshberg and King et al.

Claims 10-29, either directly or indirectly, recite language similar to that discussed above with respect to Claim 9 and are therefore allowable over Hirshberg and King et al. for at least the same reasons.

Conclusion

In light of the above discussion, it is apparent that the Examiner has failed to establish that Applicants' Claims 9-29 are unpatentable in view of above-cited art. Accordingly, Applicants urge that all of the Examiner's rejections be reversed and respectfully requests that Claims 9-29 be allowed.

Respectfully submitted,



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